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Narrow versus broad judicial decisions

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Abstract
A central debate among judges and legal scholars concerns the appropriate scope of judicial opinions: should decisions be narrow, and stick to the facts at hand, or should they be broad, and provide guidance in related contexts? A central argument for judicial 'minimalism' holds that judges should rule narrowly because they lack the knowledge required to make general rules to govern unknown future circumstances. In this paper, we challenge this argument. Our argument focuses on the fact that, by shaping the legal landscape, judicial decisions affect the policies that are adopted, and that may therefore subsequently be challenged before the court. Using a simple model, we demonstrate that in such a dynamic setting, in which current decisions shape future cases, judges with limited knowledge confront incentives to rule broadly precisely *because* they are ignorant.

Keywords
Judicial review; judicial minimalism; constitutional interpretation; broad and narrow rulings

1. Introduction

The US Supreme Court exercises judicial review in the course of resolving particular disputes.[1] It is not surprising that the contextual nature of decisions has given rise to competing views regarding their appropriate scope. One position, exemplified by Justice Antonin Scalia, holds that opinions should not be tied too closely to the facts of the particular cases that give rise to them. Instead, the justices ought to develop *broad* rules that enhance predictability in the law and provide clear guidance to policymakers, lower

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courts, and individuals in related circumstances (see e.g. Scalia, 1989). Others, including former Justice Sandra Day O'Connor and Chief Justice John Roberts, have argued for the opposite approach. In this view, judicial opinions should be *narrow*, that is, they should 'stick to the case at hand' and avoid, to the extent possible, rules that wander beyond the specific issues presented. As Chief Justice Roberts put it in a commencement address at Georgetown University Law School in 2006: 'If it's not necessary to decide more to dispose of a case, in my view, it's necessary not to decide more (Associate Press, 2006).'

The difference between these approaches is best illustrated with the help of examples. Consider *Employment Division v. Smith*, a 1990 case involving a challenge to the denial of unemployment benefits by individuals who had lost jobs as a result of consuming peyote, a controlled substance, during a native American religious ceremony. The Supreme Court rejected the claim that the employees' right to the free exercise of religion had been infringed. In doing so, Justice Scalia's opinion crafted a broad rule. Rather than restrict itself to upholding the denial of unemployment benefits as a result of drug use, the opinion established that governments are *generally* free to impose restrictions that affect religious practice without violating the First Amendment if there exists a legitimate (non-religious) reason for regulating the behavior. As a result, the opinion provides relatively clear guidance to lower courts, governments, and citizens with respect to the constitutionality of a wide range of potential restrictions on religious behavior.[2] In contrast, in *City of Ontario v. Quon*, a 2010 decision, the Supreme Court held that the audit of a police officer's city-issued pager did not constitute a violation of the Fourth Amendment. The Court's decision was narrow, focusing on the fact that, in this instance, administrators had a valid, work-related reason for the audit. Justice Kennedy's opinion explicitly rejected the notion of devising a more general rule to govern searches of the electronic communications of government employees.

One prominent argument in favor of such judicial 'minimalism' focuses on the fact that judges may lack the knowledge required to develop broad rules that are appropriate for (unknown) future circumstances. As a result, broad opinions run the risk of announcing rules that turn out to be inappropriate ex post, and that may be difficult or costly to change. To avoid such 'lock-in', judges ought to rule narrowly, and only extend rules 'piece-meal' as new cases allow them to do so. As Cass Sunstein has put it, a court 'does best if it proceeds narrowly and if it avoids steps that might be confounded by unanticipated circumstances' (Sunstein, 2005, p. 1903). To do so is no more than an acknowledgment 'that there is much that it does not know' (Sunstein, 1999, p. ix). Indeed, Justice Kennedy's opinion in *Quon* stresses this 'knowledge problem' as a rationale for its limited scope:

> Prudence counsels caution before the facts in the instant case are used to establish far-reaching premises . . . A broad holding concerning employees' privacy expectations vis-à-vis employer-provided technological equipment might have implications for future cases that cannot be predicted. It is preferable to dispose of this case on narrower grounds.

In this paper, we consider this 'epistemological' argument for judicial minimalism. Specifically, we ask whether judges with limited knowledge may, under certain circumstances, have reason to issue broad decisions precisely because they know that there is 'much that they don't know'. Perhaps surprisingly, our answer to this question is 'yes'.

What is the intuition behind this claim? Some of the most significant decisions that judges make are those that evaluate the constitutionality of policies adopted by legislators and bureaucrats. When a court, especially a high court, issues such a decision, it provides guidance about what is (or is not) constitutionally acceptable in the court's eyes. Policymakers react, and adjust policy in light of the court's ruling. Abortion policy in the US states, for example, has been shaped by the Supreme Court's decision on what constitutes an undue burden on access to abortion. This is significant for the problem at hand since only those policies that are adopted can be subsequently challenged before the court. Because narrow and broad decisions do not change the legal landscape in the same way, they lead policymakers to respond in different ways. That is, the distinction between a narrow and a broad decision shapes the cases that judges are likely to hear in the future. As we show, in this dynamic setting, broader rules, even if they involve the risk of being 'wrong', can sometimes be desirable from the justices' point of view because they enhance the ability of judges to craft 'good law'.[3]

Before proceeding, a caveat is in order. We are engaging a particular argument for the desirability of narrow decisions, namely that judges have limited knowledge and therefore ought to be cautious in pronouncing on issues not yet presented to them. There are, of course, arguments in favor of judicial minimalism that derive from other considerations. Most important, perhaps, is a concern for the proper role of judges in a democratic society. As Sunstein has argued forcefully, narrow decisions have the virtue of preserving maximum scope for decision-making by democratically elected (and accountable) institutions.[4] Our argument does not negate this objection to broad decisions; we merely aim to muddy the waters by suggesting that for judges with limited knowledge, broad rulings can, contrary to the epistemological objection, serve the purpose of developing 'better' legal rules more efficiently than narrow opinions, at least on occasion.[5]

In the model we develop, we capture the spirit of the 'epistemological objection' by assuming that judges subscribe to a legal philosophy that separates 'acceptable' and 'unacceptable' (governmental) actions, and that they are motivated by a desire to see prevailing legal rules come as close as possible to reflecting their legal principles.[6] While judges have clear conceptions of the legal principles they value, they are uncertain about how they would evaluate specific policies in light of those principles. In hearing a case, they learn about the implications of their legal principles for the policy at issue (and they can, on the basis of this knowledge, make educated guesses about related policies). For example, a judge may believe that regulations that impose an 'undue burden' on a fundamental liberty are unacceptable. But knowing whether any *particular* regulation fails by this standard only becomes clear in the judge's mind when she considers the regulation and its impact in the context of the evidence and arguments presented in a concrete dispute.[7] The critical implication of thinking about judicial preferences in this manner is that judges always face some uncertainty about how they would evaluate policies that have not yet been challenged in front of them. This uncertainty captures the epistemological objection because it introduces the risk that broad rules, which make pronouncements with respect to policies the court has not yet reviewed, could be 'mistaken' in declaring certain policies (un)constitutional.[8]

The paper proceeds as follows. In the next section, we present a model that formalizes the choice between narrow and broad opinions confronting judges. We then demonstrate that under a wide range of conditions, judges with limited knowledge can use broad rulings to craft better legal rules over time. A final section interprets the results and concludes. All proofs are relegated to the appendix.

2. Limited knowledge and legal breadth

In this section, we develop a model that explores the logic of the epistemological objection to broad rulings. The model is designed to take account of two central features of the process in which judges craft law.

1. Judges are uncertain about the policy implications of legal principles until they review a policy.
2. Judicial opinions change the legal landscape and therefore affect policies that are subsequently adopted. This, in turn, shapes the cases that judges hear in the future.

The central question we ask is whether in this dynamic setting, the conventional argument that judges with incomplete knowledge ought to rule narrowly holds. Surprisingly, we show that judicial ignorance can provide a reason for being broad rather than narrow. The key intuition is that judges can use broad opinions to shape policy responses in ways that help them craft 'better' law in the future. To develop this argument, we employ a one-dimensional spatial model of the interactions between a judge and a policymaker. Without loss of generality, we assume that the policy space is restricted to $X = [0, 2]$. The dimension represents policies that are adopted by the policymaker and challenged before the judge. We assume that the policymaker is endowed with spatial policy preferences. Letting $\alpha \in (0, 2)$ denote the policymaker's ideal point, these preferences are represented by the function $\pi(x; \alpha) = z(| x - \alpha |)$, where z is a continuously decreasing function, which implies that the policymaker always prefers policies closer to his ideal point.[9]

The judge's motivations differ from the policymaker's: the judge is committed to a legal principle that identifies some legally relevant quality of policies (e.g. the degree to which a regulation burdens a fundamental liberty), and then evaluates policies against this criterion. We assume that policies can be meaningfully ordered in terms of the legally relevant quality. For example, as we move from left to right, regulations become increasingly burdensome, or search procedures become increasingly intrusive.[10] As a result, as we move to the right, given a judge's legal principle, policies at some point become too burdensome, and thus unacceptable. Of course the precise point at which this occurs depends on the legal principle, and may therefore differ among judges. For any judge, the preferred legal regime is one in which policies that are acceptable under her legal principle are deemed 'constitutional' and policies which are unacceptable are deemed 'unconstitutional'. More precisely, a legal principle is characterized by a threshold θ. Policies less than or equal to θ are acceptable under this principle. Policies above θ are unacceptable. Thus, the preferred legal regime of a judge with a legal principle characterized by θ is one in which all policies $x \leq \theta$ are deemed constitutional and all policies $x > \theta$ are deemed unconstitutional. See Figure 1 for an illustration.

The critical ingredient of the epistemological objection to broad rules is that judges face uncertainty over the application of legal principles to specific policies until they have heard the relevant arguments and seen the evidence. In our framework, this means that

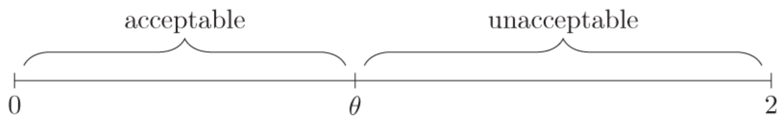

Figure 1. *Classifying policies.* As we move from left to right, policies become more burdensome in terms of the legally relevant criterion. Policies that are less than or equal to θ are acceptable under the judge's legal principle and policies that fall above θ are unacceptable.

the judge does not know the precise location of the threshold θ that divides acceptable policies from unacceptable policies. Formally, the judge may know that she regards policies that are sufficiently 'moderate' as acceptable (those below some threshold a) and that she regards some policies as unacceptable because they are 'too extreme' (those above some threshold $b > a$). But she is uncertain about how she feels about policies that lie between a and b. That is, from judge's perspective, θ, the cut-off that separates constitutional from unconstitutional policies, is a random variable with support (a, b). Asked 'in the abstract' whether a particular policy $x \in (a, b)$ is acceptable, the judge is not sure. But once the judge reviews a specific policy x, and is presented with evidence and arguments, she learns whether x falls to the left ('x is acceptable') or right ('x is unacceptable') of θ, and in doing so, learns something about the location of θ.[11] For example, suppose that the judge reviews x and discovers that she regards it as acceptable. She has now learned θ must lie somewhere in $[x, b)$. Similarly, if she regards x as unacceptable, θ must lie somewhere in (a, x). This modeling approach captures the intuitive notion that a judge who is unsure about the implications of her legal principles for a specific policy area becomes more certain as she hears more and more cases. As a result, she can formulate legal rules with greater accuracy and confidence.[12]

The model consists of two periods. The restriction to two periods ensures that the model is tractable, while preserving the dynamic that is at the heart of our argument: the judge can learn from hearing cases across the two periods, and the policymaker can respond to first-period decisions in the second period. The critical question is whether there are reasons for the judge to issue a broad ruling in the first period (we make precise what we mean by 'narrow' and 'broad' below).

In what follows, we assume that there is an existing status quo policy, which we take to be $x = 0$, and this policy has been found to be acceptable and declared constitutional by the judge at some earlier point in time. The sequence of play is:

1. *Legal threshold is drawn.* Neither the policymaker nor the judge observe θ, but both know that θ is uniformly distributed on $X = [0, 2]$.
2. *First-period review stage.* The judge reviews an (exogenously given) policy $x_1 \in X$. She learns whether x_1 is acceptable under her legal principle or not. The judge issues a legal rule that declares x_1 constitutional or unconstitutional, and that may (but need not) make pronouncements on the constitutionality of other policies (we provide a more precise definition of legal rules next).

3. *First-period implementation stage.* If the judge's rule declares x_1 unconstitutional, policy reverts to the status quo $x = 0$; otherwise $x = x_1$ is implemented.
4. *Second-period policymaking stage.* The policymaker, who has observed the judge's first-period ruling, proposes a second-period policy x_2.
5. *Second-period review stage.* The judge reviews policy x_2, learns whether it is acceptable under her legal principle, and issues a decision that declares x_2 constitutional or unconstitutional, and announces a final legal rule.
6. *Second-period implementation stage.* If the judge's rule declares x_2 unconstitutional, policy reverts to the current status quo ($x = 0$ if x_1 was unconstitutional; $x = x_1$ if x_1 was constitutional). If the judge's rule declares x_2 constitutional, it is implemented.

The task for the judge is to craft legal rules. Formally, a legal rule is a function that maps every policy $x \mapsto$ {constitutional, unconstitutional, undecided}. A special type of legal rule is a *bright-line rule*. A bright-line rule announces a cut-point $r \in X$, such that policies above the cut-point are declared unconstitutional and policies below the cut-point are declared constitutional. The important feature of a bright-line rule is that it unambiguously classifies *every* policy as either constitutional or not. We assume that the ultimate goal of the judge is to work towards a legal regime that provides such certainty. In our two-period model, we capture this feature by assuming that the judge will announce a bright-line rule at the end of period two. Clearly, the judge's most preferred bright-line rule is $r = \theta$, which disposes of all cases in accordance with her preferences.[13] As r diverges from θ, more and more cases are disposed of incorrectly. We represent the judge's preferences over bright-line rules with the utility function $u(r;\theta) = - \mid r - \theta \mid$.

We assume that in the first period, the judge is not confined to bright-line rules. Instead, she is free to issue 'incomplete rules'. Unlike bright-line rules, incomplete rules make definitive statements only about a subset of policies. Specifically, suppose that in hearing a case, the judge learns that x_1 is unacceptable under her legal principle and she announces a first-period 'incomplete rule' $r_1 \in [0, x_1]$. The meaning of this rule is that policies above r_1 are declared unconstitutional (including x_1), but the judge reserves judgment on policies below r_1 (that is, the rule does not declare policies below r_1 constitutional: it leaves the status of these policies 'undecided'). Conversely, if she learns that x_1 is acceptable, she announces a rule $r_1 \in [x_1, 2]$ that partitions policies into those that are constitutional (policies below r_1), and those on which the judge has yet to take a stand (those above r_1).[14]

2.1. Broad and narrow rules

Within the set of incomplete rules, we can distinguish between broad and narrow rules. Suppose the judge wants to declare x_1 constitutional. There are two types of incomplete rules the judge can announce (the corresponding rules for declaring x_1 unconstitutional are symmetric):

- A *narrow* opinion, which sets $r_1 = x_1$;
- A *broad* opinion, which sets $r_1 > x_1$.

The first rule is 'narrow' in the sense that the judge leaves all policies about which she is still uncertain 'undecided', that is, the judge does not decide more than is necessary to dispose of the first-period case correctly. To see this, note that if x_1 is acceptable under the judge's legal principle, then by implication all $x < x_1$ are acceptable in the judge's eyes as well, and the judge knows this.[15] Thus, a narrow rule makes definite pronouncements only for policies about which the judge is certain. In contrast, the second type of rule is 'broad' in the sense that it declares some policies constitutional about which the judge is still uncertain (specifically, $x \in (x_1, r_1])$.[16] Consider how the two opinions used as illustrative examples in the introduction fit into this modeling approach. In *Quon*, Kennedy's opinion was narrow. It declared that x_1 (the audit of Quon's messages) was constitutional, but it explicitly refused to speculate whether other policies (i.e. searches) might raise concerns. In contrast, Scalia's opinion in *Employment Division* was broad. It announced that x_1 (withholding of benefits) was constitutional *and* that other restrictions that the Court had not yet confronted would be constitutional as well.

This formulation allows us to capture the essence of the epistemological objection to broad opinions. Because broad opinions apply to policies the judge has not yet reviewed, they may get it wrong: a broad rule might declare as constitutional policies that the judge would regard as unacceptable were she to review a case involving them (and vice versa). Naturally, this is only a problem if opinions are 'sticky'; that is, if, having been announced, a broad rule cannot be undone costlessly in the future. We capture this final aspect by assuming that the judge is bound by stare decisis, that is, that the second-period rule must be consistent with the first-period rule.

Definition 1 *The second-period rule is consistent with the first-period rule if all policies declared unconstitutional (constitutional) under the first-period rule are also declared unconstitutional (constitutional) under the second-period rule.*

To see the implications of consistency, consider the case in which the judge's first-period rule declares all policies weakly above r_1 unconstitutional (and remains silent on all policies below r_1). Then consistency requires that the judge's second-period rule also declare all policies weakly above r_1 unconstitutional (and so $r_2 \leq r_1$).[17]

To close out the description of the model, we must specify the player's payoffs. We assume that the policymaker cares about the policy implemented in the second period. Formally, if x is implemented in period two, the policymaker's payoff is $\pi(x; \alpha)$. The judge cares about how closely the final legal rule approximates the rule she would craft if she had perfect information about the legal threshold. That is, given the underlying threshold θ and the second-period bright-line rule r_2, the judge's payoff is $u(r_2; \theta)$. In analyzing the model, we restrict attention to sequential equilibria (Kreps and Wilson, 1982). Formal proofs of all results are in the appendix.

2.2. The informational value of cases

To develop the intuition that explains why the judge may choose to use different legal rules, and in particular, broad rules, in period one, we must begin by considering the problem confronting the judge at the end of the game: she must craft a legal rule that approximates her underlying legal principles despite the fact that she is uncertain about how she evaluates policies she has not yet reviewed. Thus, when she chooses the final legal rule, she must do so in light of her uncertainty about the extent to which different rules approximate the underlying legal threshold. Consider what this implies for the choice of a bright-line rule. Suppose that at the end of period two, the judge believes that θ is uniformly distributed over some interval $[a, b]$.[18] (Of course, the precise values of a and b depend on the history of play.) The judge's expected payoff from issuing a bright-line rule with cut-point r_2 is therefore given by

$$\int_a^b u(r_2, \theta)\left(\frac{1}{b-a}\right) \mathrm{d}\theta.$$

This expression is maximized when the judge sets $r_2 = (a+b)/2$. As is intuitive, given her beliefs over θ, the judge minimizes the expected distance between the cut-off of her bright-line rule and the legal threshold by setting the cut-off to the midpoint of the interval $[a, b]$.

Now consider the judge at the beginning of period two before she has reviewed x_2. Suppose she regards x_1 as unacceptable, and so holds the updated belief that θ is uniformly distributed on $[0, x_1)$.[19] Imagine that the judge could *choose* which policy among the remaining potentially acceptable policies to review before she issues her final rule. Which policy $x_2 \in [0, x_1)$ would she prefer to see? The expected utility from reviewing x_2 given her belief that θ is uniformly distributed on $[0, x_1)$ is a function of the likelihood that x_2 is acceptable (which occurs if $x_2 \leq \theta$; this leads to final rule $(x_1 + x_2)/2$) and the likelihood that x_2 is unacceptable (which occurs if $x_2 > \theta$; this leads to final rule $x_2/2$). Thus, her payoff from reviewing $x_2 \in [0, x_1)$ is

$$\int_0^{x_2} u\left(\frac{x_2}{2}; \theta\right) \frac{1}{x_1} \mathrm{d}\theta + \int_{x_2}^{x_1} u\left(\frac{x_1 + x_2}{2}; \theta\right) \frac{1}{x_1} \mathrm{d}\theta.$$

The above expression is strictly concave on $[0, x_1]$ and is maximized when $x_2 = x_1/2$. That is, the policy that the judge would most like to review is equal to the mid-point of the 'uncertainty interval' that remains at the beginning of period two. Moreover, review of other policies becomes *less* valuable as these policies are further from this mid-point.[20] The intuition is not hard to see. Given her uncertainty over θ, the judge would like to review a policy that allows her to reduce this uncertainty as efficiently as possible. Reviewing something close to the previous policy x_1 holds little value; more generally, policies close to the boundaries of the uncertainty interval are not very informative because review of such policies is unlikely to have a significant effect on the judge's beliefs about the location of θ. Instead, the judge wants to review a policy that provides significant additional information; ideally, this means a policy at the mid-point of the (current) uncertainty interval.

This is the critical insight: the judge wants to review policies that are informative in the sense of helping her to develop a better legal rule. This fact provides her with a reason to worry about how the policymaker will respond to current rulings. Suppose that in response to a narrow decision, the policymaker adopts a second-period policy that is very close to x_1. (If x_1 has been declared unconstitutional, the policymaker might do so despite the risk of judicial censure because he is highly committed to pursuing a policy close to x_1; if x_1 is constitutional, he might do so because he is risk-averse and wants to ensure judicial approval in period two.) If this is the case, one consequence of ruling narrowly is that the judge cannot 'learn' much about her legal preferences (i.e. the location of θ) from the next period case: the policy induced by a narrow ruling is simply not very informative. This may provide the judge with an incentive to rule broadly.

2.3. Pushing the policymaker

The previous section established that the judge has strict preferences over the policies she would like to review in period two. When the judge believes that θ is uniform on $[0, x_1]$, the policy she most wants to review is $x_2 = x_1/2$; when she believes that θ is uniform on $[x_1, 2]$, it is $x_2 = (x_1 + 2)/2$. Policies decline in 'informational value' as they get further from these points. Of course, the judge cannot *directly* choose which policy to review, since only those policies that the policymaker proposes can come before the judge. How informative the period-two policy is therefore depends upon the policymaker's decision.

To see the implications of this fact, consider a case in which the judge reviews x_1 and finds it unacceptable under her legal principle.[21] As a result, the judge and policymaker believe that θ is uniform on $[0, x_1)$. Suppose the judge rules narrowly, declaring x_1 and all policies above it as unconstitutional. How will the policymaker react to this decision? If the policymaker proposes a policy $x_2 \geq x_1$, it will be declared unconstitutional. If he proposes a policy $x_2 < x_1$, it is declared constitutional if the judge finds it acceptable under her legal principle, and declared unconstitutional otherwise (resulting in reversion to the status quo policy $x = 0$). The probability that the judge finds $x_2 \in [0, x_1)$ acceptable is $(x_1 - x_2)/x_1$. Thus, the policymaker's expected utility from proposing $x_2 \in X$ is

$$\begin{cases} \frac{x_2}{x_1}\pi(0;\alpha) + \frac{x_1 - x_2}{x_1}\pi(x_2;\alpha), & \text{if } x_2 < x_1 \\ \pi(0;\alpha), & \text{if } x_2 \geq x_1. \end{cases} \tag{1}$$

This expected utility is maximized either at or to the left of the policymaker's ideal point.[22] The fact that the policymaker may choose to make a proposal to the left of his ideal point stems from his concern about having the proposal declared unconstitutional: he may be willing to moderate his proposal in order to increase the likelihood of a constitutionality ruling. In what follows, we use x^* to denote the proposal x_2 that maximizes (1).

We are now in a position to see why the judge may have reason to rule broadly in period one. Suppose that instead of ruling narrowly, she rules broadly, setting $r_1 < x_1$ (which implies that policies $x_2 \in (r_1, x_1)$ will be declared unconstitutional, even though the judge, on the basis of the first period case, is not certain how she would view such policies if he reviewed them). In the face of such a ruling, the policymaker knows that proposing $x_2 > r_1$ will result in a judicial veto, something he wants to avoid. If the rule is sufficiently broad and outlaws the policy the policymaker would adopt in response to a narrow rule (i.e. $r_1 < x^*$), he will respond by choosing the closest 'legal' policy to x^*, setting $x_2 = r_1$.[23]

In other words, if a ruling is broad enough, the judge can induce the policymaker to make a more moderate proposal than he would otherwise. Why might the judge want to do so? We illustrate the logic in panel (a) of Figure 2. Recall that the most informative policy for the judge, the policy she would most prefer to review, is $x_1/2$. Suppose that left to his own devices, the policymaker will exploit the legal room created by a narrow ruling to adopt a policy x^* that is close to the one that has just been struck down. Rather than accept such an uninformative response, the judge can issue a broad rule to the left of x^* that will 'push' the policymaker to a more moderate, and informative, proposal. Of course, doing so has costs (these costs, which will be the focus of the next section, explain why the judge will not push the policymaker all the way to $x_1/2$). But for the

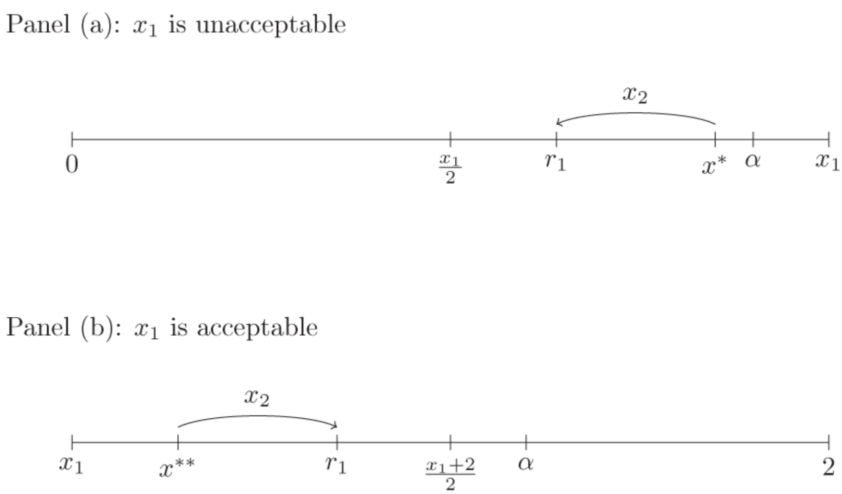

Figure 2. *Effects of breadth.* In panel (a), if the judge issues a narrow ruling, the policymaker proposes $x_2 = x^*$. If the judge issues broad ruling r_1, she is able to induce the policymaker to propose a more moderate policy, $x_2 = r_1$. In panel (b), if the judge issues a narrow ruling, the policymaker proposes $x_2 = x^{**}$. If the judge issues broad ruling r_1, she is able to induce the policymaker to propose a more aggressive policy, $x_2 = r_1$.

moment, note that there is a potential informational benefit to a broad rule: by 'pushing' an 'aggressive' policymaker, a broad rule can result in future cases that make it easier for the judge to craft good law.

Now consider the case in which the judge regards x_1 as acceptable, and has issued a narrow ruling to uphold it (setting $r_1 = x_1$). Given this ruling, the policymaker believes that the judge's legal threshold is uniform on $[x_1, 2]$, and he knows that if x_2 is declared unconstitutional, policy reverts to x_1 (the current status quo). Conversely, if x_2 is upheld, it will be implemented. Moreover, for any $x_2 \in (x_1, 2]$, the judge is not constrained by stare decisis, and will declare x_2 constitutional if it is consistent with her legal principles, and strike it down otherwise. What proposal x_2 should the policymaker make? The judge will declare $x_2 \in (x_1, 2]$ constitutional with probability $(2 - x_2)/(2 - x_1)$. In contrast, if he proposes $x_2 \leq x_1$, the judge will declare the proposal constitutional with certainty. Thus, the policymaker's expected utility is given by:

$$\begin{cases} \pi(x_2; \alpha), & \text{if } x_2 \leq x_1 \\ \frac{x_2 - x_1}{2 - x_1}\pi(x_1; \alpha) + \frac{2 - x_2}{2 - x_1}\pi(x_2; \alpha), & \text{if } x_2 > x_1. \end{cases} \tag{2}$$

Once again (for the same reasons), the policy that maximizes (2), which we denote by x^{**}, must lie at or to the left of the policymaker's ideal point. And once again, there exists a potential rationale for a broad first-period ruling, although driven by a slightly different logic. We illustrate this scenario in panel (b) of Figure 2. Suppose that a timid policymaker (i.e. one very concerned to avoid a judicial veto in period two) with ideal point $\alpha > x_1$ reacts to a narrow ruling by proposing a policy x^{**} that is very close to x_1 (and therefore likely to be upheld). This proposal is not very informative for the judge, who would prefer to review a policy close to $(x_1 + 2)/2$. Putting it differently, from the judge's perspective, the policymaker's risk aversion leads him to hew too closely to the policy just upheld. By writing a broad rule with cut-off $r_1 > x_1$ (which guarantees that all policies in the $(x_1, r_1]$ interval will be declared constitutional) the judge can provide reassurance that leads the policymaker to make a bolder and more informative proposal than he otherwise would. Specifically, a broad rule $r_1 \in (x^{**}, (x_1 + 2)/2]$ will lead a timid policymaker to propose $x_2 = \min\{\alpha, r_1\}$, which is closer to the judge's preferred policy than x^{**} (see the figure).[24] Of course, as in the previous case, the fact that a broad rule *can* induce a more informative second-period proposal does not imply that the judge will want to rule broadly; there are potential costs to doing so, and we consider these trade-offs in the next section. Nevertheless, we have established that a broad ruling *can* provide informational benefits to the judge.

2.4. The costs of breadth

There are potential gains to the judge in issuing a broad ruling in period one. But of course, broad rulings also have a downside: they can generate lock-in costs. Suppose the judge finds x_1 unacceptable and issues a broad ruling $r_1 < x_1$. The policymaker will respond to this ruling by proposing a policy within the remaining 'legally permissible' range, that is, $x_2 \leq r_1$. If the judge learns that she regards x_2 as acceptable, she has discovered that her underlying legal threshold lies between x_2 and x_1, and she would like to set the final bright-line rule $r_2 = (x_2 + x_1)/2$. Unfortunately, the requirement that the second-period rule must be consistent with her first-period rule may prevent her from being able to announce this rule whenever x_2 is sufficiently close to r_1 (since whenever x_2 is close enough to r_1, $r_1 < (x_2 + x_1)/2$). The best the judge can do in such a situation is to affirm the existing rule (i.e. set $r_2 = r_1$). This situation captures the epistemological objection to broad rulings: judges run the risk of being 'locked in' to inappropriate rules by the forces of stare decisis (or any other force that pushes them towards legal consistency).

This, then, is the fundamental trade-off confronting judges in our model: by issuing broad rulings, they can shape policy responses by the policymaker, and thus ensure that they will hear more informative cases than those that result from a narrow ruling. But doing so comes at the potential cost of being 'stuck' with legal rules that turn out to be less than ideal in light of new evidence. In short, the informational gains associated with using judicial breadth must be weighed against the associated lock-in costs. Intuitively, how this trade-off plays out depends critically on how close the policy- maker's response to a narrow ruling is to the previous policy x_1. In other words, it depends on how 'informative' the policymaker's proposal is. And this, in turn, depends on the policymaker's preferences, specifically on the policymaker's ideal point (which policy does he wish to implement?) and on his attitudes towards risk (how does the policymaker view the potential trade-off between pursuing his policy goal and the threat of a judicial veto?). In the next section, we turn to this issue, and provide equilibrium conditions that will lead the judge to issue broad rulings.

3. Ruling broadly: Equilibrium conditions

As we have just seen, the judge may have an incentive to rule broadly if the policymaker's response to a narrow ruling is close to the original policy. This may occur for two reasons. If the judge finds the first-period policy unacceptable, it may occur because the policymaker is so risk-accepting in pursuing his preferred policy that he is willing to exploit the legal maneuver room left by a narrow rule to adopt a policy close to x_1 despite the risk of judicial censure. If the judge finds the first-period policy acceptable, it may occur because the policy-maker is so risk-averse that he adopts a policy close to x_1 in hopes of securing judicial approval. What differentiates the two scenarios is that in one, the policy-maker is risk-accepting and has sufficiently extreme preferences, while in the other he is sufficiently risk-averse.

In this section, we flesh out this intuition by presenting two propositions, one that deals with the case in which the judge finds the first-period policy unacceptable and one that deals with the case in which the judge finds the first-period policy acceptable. For each scenario, we identify the class of policymakers whose proposals are sufficiently uninformative that ruling broadly is optimal. In particular, we allow policymakers to vary across two dimensions: their ideal point and their tolerance toward risk. In stating the propositions, we assume without loss of generality that the exogenous first-period policy $x_1 = 1$. The first proposition covers the case in which the judge concludes that the first-period policy is inconsistent with her legal principles. As a result, the judge (and policymaker) believes that θ is uniformly distributed on $[0, 1)$.

Proposition 1 *Suppose the judge regards* $x_1 = 1$ *as unacceptable, and the policymaker's expected utility is single-peaked on* $[0, \min\{\alpha, 1\}]$.[25]

(a) If the policymaker is risk-averse (π is strictly concave), the judge will never rule broadly.
(b) If the judge rules broadly, the policymaker's ideal point must be sufficiently extreme ($\alpha > (3 + \sqrt{3})/6$).
(c) If the judge issues a broad ruling, she sets $r_1 = 2/3$.
(d) If the policymaker is risk-accepting, and his ideal point satisfies (b), then scenarios exist under which the judge rules broadly.

Consider the intuition behind part (a). Because a risk-averse policymaker is concerned to avoid a judicial veto, he responds to a narrow rule with a policy that is already so moderate that a broad rule cannot provide informational gains to the judge. The intuition behind part (b) is similar. Policymakers whose ideal point is moderate (i.e. $\alpha < (3 + \sqrt{3})/6$) respond to a narrow ruling with a proposal that is already so different from x_1 that the informational gains of a broad ruling do not justify the associated lock-in costs. Only if the policymaker is sufficiently extreme in his preferences may the response to a narrow ruling be so uninformative that it is beneficial to 'push down' the proposal with the help of a broad ruling. Part (c) identifies *which* broad rule the judge will adopt; note that this rule is *above* the most informative policy the judge could review, and which she would choose to review in an 'unconstrained' world ($x_2 = 1/2$). Because the judge incurs lock-in costs for pushing down the policymaker, she chooses *not* to push all the way to $1/2$; the informational gains of doing so do not outweigh the additional lock-in costs.

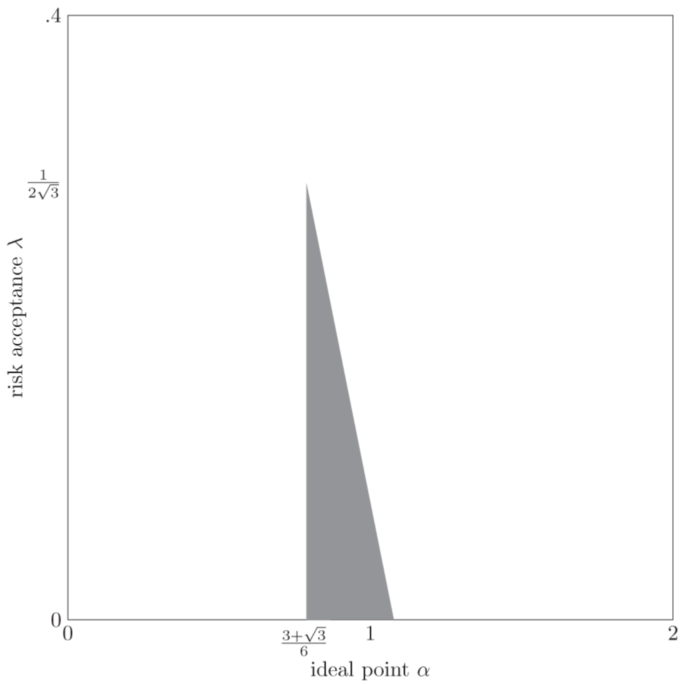

Figure 3. *Class of policymakers for which breadth is optimal when $x_1 = 1$ is unacceptable.* The shaded region indicates those values of α and λ for which the judge rules broadly, using legal breadth to push the policymaker to propose a more moderate policy. In the shaded region, the judge sets the cut-off of her first-period rule $r_1 = 2/3$.

Part (d) is illustrated in Figure 3. To draw this figure, we impose a specific functional form, assuming that the policymaker's payoff function is given by $\pi(x_2; \alpha, \lambda) = 1/(|\ x - \alpha\ | + \lambda)$, where $\lambda > 0$. This utility function (chosen largely for analytical tractability) is risk-accepting on $[0, \alpha]$. As λ decreases, the policymaker is more willing to bear the risk of judicial censure in pursuit of his ideal point. Put differently, as λ decreases, the policymaker becomes more risk accepting. As a result, as λ approaches 0, the policymaker may become so aggressive in the second-period proposal that a broad ruling is worthwhile. The shaded region of Figure 3 identifies those values of α and λ for which the judge rules broadly. Note that she issues a broad rule only if the policymaker's ideal point is sufficiently extreme ($\alpha > (3 + \sqrt{3})/6$) and the policymaker is sufficiently risk-accepting (λ is small enough); jointly, these conditions ensure that the response to a narrow ruling is so close to x_1 that a broad ruling is optimal.[26]

We now turn to the case in which the judge concludes that the first-period policy is acceptable, which implies that the judge (and policymaker) believes that θ is uniformly distributed on $[1, 2]$.

Proposition 2 *Suppose the judge regards $x_1 = 1$ as acceptable, and the policymaker's expected utility is single-peaked on $[1, \alpha]$ whenever $\alpha > 1$.*

(a) The judge never rules broadly when $\alpha \in (0, 1]$.
(b) If the policymaker is risk-averse and $\alpha \in (1, 2)$, then scenarios exist under which the judge rules broadly.
(c) If the judge rules broadly and $\alpha \in (1, 4/3]$, she sets $r_1 = \alpha$.
(d) If the judge rules broadly, $\alpha \in (4/3, 2)$, and the policymaker is risk-averse (π is concave), she sets $r_1 = 4/3$.

Given that $x_1 = 1$ has been declared constitutional, whether through a broad or a narrow rule, so will any policy $x_2 < 1$. Hence, a policymaker with an ideal point of $\alpha \leq 1$ will propose his ideal point, knowing it will be upheld. Thus, there is no value to a broad rule. This is the intuition behind part (a). The logic that drives (b) is that as the policymaker becomes more risk-averse, he becomes so concerned to avoid a judicial veto that he adopts a second-period policy very close to the status quo, $x_1 = 1$. As a result, the judge can benefit from providing a broad ruling that reassures the policymaker that he can safely make a more aggressive proposal. Parts (c) and (d) summarize which broad rule the judge will adopt. Recall that the judge can never 'push' a policymaker to propose a policy beyond his ideal point, and therefore never has an incentive to issue a broad rule that exceeds the policymaker's ideal point. Second, once r_1 exceeds $4/3$, the marginal increase in lock-in costs associated with an incremental increase in breadth exceeds the informational gains the judge accrues from pushing the policymaker to propose a slightly less timid policy. Hence, if $\alpha \in (1, 4/3]$ and the judge rules broadly, she sets $r_1 = \alpha$. If $\alpha \in (4/3, 2]$ and the judge rules broadly, the judge sets $r_1 = 4/3$. Proposition 2 is illustrated graphically in Figure 4. To draw this figure, we assume that $\pi(x; \alpha, \lambda) = - \mid x - \alpha \mid^{\lambda}$, where $\lambda > 1$ (note that when $\lambda = 2$, we have a standard quadratic loss function). Increasing λ has the effect of increasing the policymaker's aversion to risk, and thus makes him more willing to move his proposal towards x_1 in order to raise the probability of having it upheld. The judge will rule broadly in the shaded region, setting the rule equal to the policymaker's ideal point in the light region and equal to $r_1 = 4/3$ in the dark region. Note that the judge will rule broadly for a wider range of policymaker ideal points as the policymaker becomes more risk-averse: the logic behind this result is that as the policymaker becomes more risk-averse, he will respond to a narrow ruling with a second-period proposal close to x_1 even as his ideal point becomes more extreme (i.e. moves to the right).

4. Conclusion

Narrow judicial opinions are often thought superior to broad rulings that announce general rules that venture beyond the current case. There are, to be sure, a variety of arguments that inform the debate over 'judicial minimalism', including a concern to promote the primacy of democratically accountable decision-makers (e.g. Sunstein, 1999), and the value of legal certainty (e.g. Scalia, 1989). In this paper, we have considered one, albeit prominent and important, argument. This argument, which is regularly featured in opinions by Supreme Court justices, rests on the claim that the implications of legal

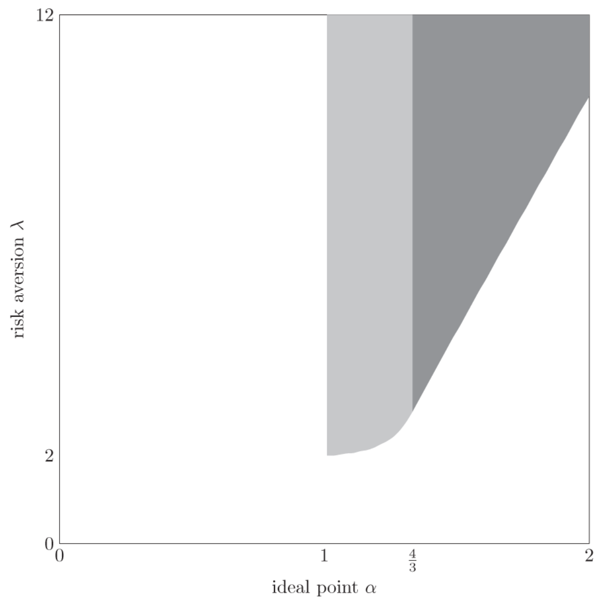

Figure 4. *Class of policymakers for which breadth is optimal when* $x_1 = 1$ *is acceptable.* The shaded region indicates those values of α and λ for which the judge rules broadly, using legal breadth to induce the policymaker to propose a more aggressive policy. In the light region, the judge sets the cut-off of her first-period rule equal to the ideal point of the policymaker, that is, $r_1 = \alpha$, and in the dark region, the judge sets the cut-off of her first-period rule $r_1 = 4/3$.

principles for particular policies and cases are often difficult to ascertain in the abstract. Especially where competing values must be balanced, judges may only know what the legal principles to which they are committed demand when they adjudicate a particular dispute. As a result, judges risk error when they announce general rules that apply to circumstances or policies with which they have not yet been confronted. In light of such uncertainty, the argument goes, narrow opinions are desirable because they limit judicial error.

We have challenged this argument. The intuition underlying the claim we make is simple. At least when judges rule on the constitutionality of the policies adopted by legislators and bureaucrats, judicial decisions shape the legal landscape by defining what is legally (im)permissible. As a result, current decisions affect the policies that will be adopted in the future. And because only those policies that are actually adopted can be challenged, current decisions affect the subsequent cases that judges will hear. As we have shown, in this dynamic setting, judicial uncertainty about the policy implications of legal principles may, in contrast to conventional arguments, provide a reason for judicial *breadth* rather than minimalism by allowing the court to guide the policy responses of overly 'aggressive' or 'timid' policymakers. Another way to put the point is to say that the epistemological argument for judicial minimalism focuses on one consequence of limited judicial knowledge: the desire to avoid mistakes. Our argument highlights that, as with most things in life, there is a trade-off: narrow rulings prevent the adoption of legal rules that turn out to be inappropriate ex post. But if current decisions shape future policies, then narrow rules may also lead policymakers to respond to decisions with policies that provide judges with little useful information in crafting 'good' legal rules. Broad rulings that 'push' policymakers can help judges to develop legal rules that more accurately reflect their legal principles.

In closing, several caveats are worth noting. The first emerges from the last point. Our argument rests squarely on the fact that current decisions shape policy responses and therefore future cases. Although this assumption is plausible, especially when judges rule on public policies that are likely to be revised in light of judicial decisions, it is worth emphasizing that our argument does not apply if the issues brought before the court in the future are independent of current decisions. A second caveat is closely connected. We should be clear that the central thrust of our argument is not explanatory. We are not claiming that in choosing between a narrow and a broad approach to decisions, judges are primarily concerned with influencing public policy responses in an effort to generate 'informative' future cases.[27] Rather, the aim of the argument is to demonstrate that a prominent normative argument in favor of narrow opinions, the epistemological objection, is insufficient to establish that broad opinions are undesirable. Judicial ignorance is not *always* an argument for narrowness; judges with limited knowledge may, in fact, want to write broad opinions in order to confront their uncertainty.

A final point concerns the restriction of our model to two periods. In part, our conclusions are driven by the fact that the judge in our model is 'stuck' with the second-period rule. As a result, she is eager to use the first-period rule to learn as much as possible about her preferences. This leads her (sometimes) to rule broadly. To take the polar opposite of our model, imagine an infinitely patient judge confronting an infinite series of cases (and policies). She would have no reason to rule broadly, since she can adjust the legal rule piecemeal over time, and (because she is infinitely patient) is content to work slowly towards the ideal rule, taking no risks in ruling broadly. Clearly, our argument does not apply to this judge. In the 'real world', of course, judges fall somewhere between these poles. On the one hand, there are multiple, recurring opportunities to refine legal rules, and judges therefore do not face the same pressures as the judge in our model. On the other hand, judges do face time pressures. Some policy areas provide only infrequent opportunities to revise the law. More importantly, judges are *not* likely to be infinitely patient in developing 'good' legal rules. They know that they must eventually leave the bench. Moreover, frequent revision of a rule reduces legal certainty and imposes reliance costs on individuals who must make decisions in light of the currently prevailing rule. As a result, judges will feel some urgency to arrive at a 'good' legal rule. And if this is true, the trade-off we have identified rears its head.

Appendix

Recall the definition of s in endnote 11. This appendix considers the case in which the judge concludes that the rst-period policy $x_1 = 1$ is unacceptable (s_1 = unacceptable). Appendix A.1 deals with the incentives confronting the judge in the second period. Appendix A.2 deals with the incentives confronting the policymaker in the second period. Appendix A.3 deals with the incentives confronting the judge in the first period. Appendix A.4 formally proves Proposition 1 using the results from Appendix A.1, A.2 and A.3. The proof of Proposition 2 is proved in an analogous manner and is available upon request.

Given that the judge has concluded that $x_1 = 1$ is unacceptable, the density of the judge's posterior belief about θ at the time she issues her first-period ruling is equal to one for all $\theta \in [0, 1)$. Further, we assume that in the first period, the judge either issues a narrow ruling $r_1 = 1$ that declares $x_1 = 1$ and all policies above $x_1 = 1$ as unconstitutional, or a broad ruling $r_1 \in [0, 1)$ that declares all policies $x > r_1$ as unconstitutional. Finally, recall that we restrict the judge to using a bright-line rule r_2 in the second period. Such a rule declares all policies $x < r_2$ as constitutional and all policies $x > r_2$ as unconstitutional. How the rule treats policy $x = r_2$ is not pinned down by the definition in the main text. For technical convenience, we assume that whenever $r_2 < 1$, policy $x = r_2$ is declared constitutional.

A.1. The judge's second-period problem

Write $U(r_2; a, b)$ for the judge's expected payoff from issuing a bright-line rule with cut-off r_2 when the density of the distribution of θ is equal to $1/(b-a)$ for all $\theta \in (a, b)$. Hence,

$$U(r_2; a, b) = \int_a^b u(r_2; \theta) \frac{1}{b-a} \, \mathrm{d}\theta.$$

Fact 1. *Suppose* $0 \leq a < b \leq 2$. *Then* $U(\cdot; a, b)$ *is single-peaked in* r_2 *on* $[0, 2]$ *and is strictly maximized when* $r_2 = (a+b)/2$.

Proof: Using the fact that $u(r_2; \theta) = - \mid r_2 - \theta \mid$, we have that

$$U(r_2; a, b) = \begin{cases} -\frac{a+b}{2} + r_2, & \text{if } r_2 \leq a \\ \frac{-a^2 - b^2 + 2(a+b)r_2 - 2r_2^2}{2(b-a)}, & \text{if } a < r_2 < b \\ \frac{a+b}{2} - r_2, & \text{if } r_2 \geq b. \end{cases}$$

Hence,

$$\frac{\partial U}{\partial r_2}(r_2; a, b) = \begin{cases} 1, & \text{if } r_2 < a \\ \frac{(b+a) - 2r_2}{(b-a)}, & \text{if } a < r_2 < b \\ -1, & \text{if } r_2 > b. \end{cases}$$

Inspection reveals that for all $r_2 \in (0, a) \cup (a, (a+b)/2)$, $\partial U / \partial r_2(r_2; a, b) > 0$, and for all $r_2 \in ((a+b)/2, b) \cup (b, 2)$, $\partial U / \partial r_2(r_2; a, b) < 0$. These facts, together with the continuity of $U(\cdot; a, b)$ in r_2 on $[0, 2]$ imply that $U(\cdot; a, b)$ is single-peaked on $[0, 2]$ and is strictly maximized when $r_2 = (a+b)/2$. ■

Our requirement that the judge's second-period rule is consistent with her first-period rule implies that the cut-off of her second-period rule $r_2 \leq r_1$. In light of this fact, we have the following lemma.

Lemma 1. *In any sequential equilibrium, given that the judge's second-period rule must be consistent with her first-period rule, the cut-off of the judge's second-period rule equals*

$$\begin{cases} \min\left\{r_1, \frac{1}{2}\right\}, & \text{if } x_2 \geq 1 \text{ and } s_2 = \text{unacceptable} \\ \min\left\{r_1, \frac{x_2}{2}\right\}, & \text{if } x_2 < 1 \text{ and } s_2 = \text{unacceptable} \\ \min\left\{r_1, \frac{x_2+1}{2}\right\}, & \text{if } x_2 < 1 \text{ and } s_2 = \text{acceptable.} \end{cases}$$

Proof: Suppose $x_1 = 1, s_1 =$ unacceptable, and that the judge's second-period rule is consistent with her first period rule (so $r_2 \leq r_1$).

If $x_2 \geq 1$ and $s_2 =$ unacceptable, then in any sequential equilibrium, the density of the judge's posterior belief about θ is equal to 1 for all $\theta \in [0, 1)$, which implies that the judge's expected payoff from issuing a bright-line rule with cut-off r_2 is $U(r_2; 0, 1)$. In light of Fact 1, and our restriction that $r_2 \leq r_1$, the judge maximizes her expected payoff by setting $r_2 = \min\{r_1, 1/2\}$.

If $x_2 < 1$ and $s_2 =$ unacceptable, then in any sequential equilibrium, the density of the judge's posterior belief about θ is equal to $1/x_2$ for all $\theta \in [0, x_2)$, which implies that the judge's expected payoff from issuing a bright-line rule with cut-off r_2 is $U(r_2; 0, x_2)$. In light of Fact 1, and our restriction that $r_2 \leq r_1$, the judge maximizes her expected payoff by setting $r_2 = \min\{r_1, x_2/2\}$.

If $x_2 < 1$ and $s_2 =$ acceptable, then in any sequential equilibrium, the density of the judge's posterior belief about θ is equal to $1/(1 - x_2)$ for all $\theta \in [x_2, 1)$, which implies that the judge's expected payoff from issuing a bright-line rule with cut-off r_2 is $U(r_2; x_2, 1)$. In light of Fact 1, and our restriction that $r_2 \leq r_1$, the judge maximizes her expected payoff by setting $r_2 = \min\{r_1, (x_2 + 1)/2\}$. ■

A.2. The policymaker's problem

Suppose that the judge has reviewed $x_1 = 1$, observed that $s_1 =$ unacceptable, and has issued an incomplete rule with cut-off $r_1 \in [0, 1]$. Taking these circumstances as given, we consider the policymaker's incentives when proposing a second-period policy given that he anticipates that the judge's second-period behavior will be governed by Lemma 1. This analysis is facilitated by defining a function $\widehat{\Pi} : [0, 1] \to \mathbb{R}$, where

$$\widehat{\Pi}(x) \equiv x\pi(0; \alpha) + (1 - x)\pi(x; \alpha).$$

Fact 2. *(a)* $\widehat{\Pi}$ *has at least one maximizer on* $[0, 1]$*; further, any such maximizer is an element of* $(0, 1)$ *and weakly less than* α*. (b) If* $\widehat{\Pi}$ *is single-peaked on* $[0, \min\{\alpha, 1\}]$*, then* $\widehat{\Pi}$ *has a unique maximizer on* $[0, 1]$.

Proof: We begin with part (a). Since $[0, 1]$ is a compact interval and $\widehat{\Pi}$ inherits the continuity of its component functions, the Weierstrass Theorem ensures that $\widehat{\Pi}$ has at least one maximizer on $[0, 1]$.

We now show that any such maximizer must be strictly greater than 0 and strictly less than 1. First, notice that $\widehat{\Pi}(0) = \widehat{\Pi}(1) = \pi(0; \alpha)$. Second, as $\alpha > 0$, π is strictly increasing on $[0, \alpha]$. Thus, for any $x \in (0, \min\{\alpha, 1\})$, $\pi(x; \alpha) > \pi(0; \alpha)$. Consequently, for any $x \in (0, \min\{\alpha, 1\})$, $\widehat{\Pi}(x) > \widehat{\Pi}(0) = \widehat{\Pi}(1) = \pi(0;\alpha)$. Thus, neither 0 nor 1 are maximizers of $\widehat{\Pi}$ on $[0, 1]$.

We now show that any maximizer of $\widehat{\Pi}$ on $[0, 1]$ is weakly less than α. In the event that $\alpha \geq 1$, the result is immediate. So consider the case in which $\alpha < 1$ and suppose that $x \in (\alpha, 1]$. We need to show that $\widehat{\Pi}(\alpha) > \widehat{\Pi}(x)$:

$$\alpha\pi(0;\alpha) + (1-\alpha)\pi(\alpha;\alpha) > x\pi(0;\alpha) + (1-x)\pi(x;\alpha).$$

As α is the unique maximizer of π, $\pi(\alpha;\alpha) > \pi(x;\alpha)$, and $\pi(\alpha;\alpha) > \pi(0;\alpha)$. These facts, together with the fact that $x > \alpha$, ensure that the displayed inequality holds. Consequently, $x > \alpha$ cannot be a maximizer of $\widehat{\Pi}$ on $[0, 1]$.

We now turn to part (b). Suppose $\widehat{\Pi}$ is single-peaked on $[0, \min\{\alpha, 1\}]$, and begin by considering the case in which $\alpha \geq 1$. Thus, $\widehat{\Pi}$ is single-peaked on $[0, 1]$, and so has a unique maximizer on $[0, 1]$. Now consider the case in which $\alpha < 1$. Thus, $\widehat{\Pi}$ is single-peaked on $[0, \alpha]$, and so has a unique maximizer on $[0, \alpha]$. This fact, together with part (a), ensures that $\widehat{\Pi}$ has a unique maximizer on $[0, 1]$. ■

For the remainder of the appendix, we will assume that $\widehat{\Pi}$ is single-peaked on $[0, \min\{\alpha, 1\}]$.

Assumption 1. $\widehat{\Pi}$ *is single-peaked on* $[0, \min\{\alpha, 1\}]$.

In light of Fact 2(b), whenever Assumption 1 holds, $\widehat{\Pi}$ has a unique maximizer on $[0, 1]$, which we shall denote by x^*.

Lemma 2. *(a) Suppose the judge issues a narrow rule in period one. Then, in any sequential equilibrium, the policymaker's expected payoff from proposing policy x_2, denoted $\Pi_u^n(x_2)$, is*

$$\Pi_u^n(x_2) = \begin{cases} \widehat{\Pi}(x_2), & \text{if } x_2 < 1 \\ \pi(0;\alpha), & \text{if } x_2 \geq 1. \end{cases}$$

(b) Suppose the judge issues a broad rule with breadth $r_1 \in [0, 1)$ in period one. Then, in any sequential equilibrium, the policymaker's expected payoff from proposing policy x_2, denoted $\Pi_u^b(x_2; r_1)$, is

$$\Pi_u^b(x_2; r_1) = \begin{cases} \widehat{\Pi}(x_2), & \text{if } x_2 \leq r_1 \\ \pi(0;\alpha), & \text{if } x_2 > r_1. \end{cases}$$

Proof: Suppose that the judge has reviewed $x_1 = 1$ and observed that $s_1 =$ unacceptable. Then, in any sequential equilibrium, the density of the policymaker's posterior belief about θ is equal to 1 for all $\theta \in [0, 1)$, and the judge's behavior in the second period is governed by Lemma 1.

With this in mind, begin with part (a): consider the case in which the judge has ruled narrowly in period one. That is, she declares $x = 1$ and all policies above it as unconstitutional. The fact that $x_1 = 1$ is unconstitutional under the judge's first-period rule means that the status quo remains at $x = 0$. Consequently, if the policymaker's second-period proposal is declared unconstitutional, policy $x = 0$ is implemented. Furthermore, consistency of the judge's second-period rule with her first-period rule requires that the judge's second-period rule declare all policies weakly above $x = 1$ as unconstitutional. Hence, the policymaker's payoff from proposing a policy $x_2 \geq 1$ equals $\pi(0;\alpha)$. In contrast, if the policymaker proposes a policy $x_2 \in [0, 1)$, it will be declared constitutional if $s_2 =$ acceptable and will be declared unconstitutional if $s_2 =$ unacceptable (Lemma 1). Given the policymaker's beliefs, the probability that $s_2 =$ acceptable is $1 - x_2$ and the probability that $s_2 =$ unacceptable is x_2. Hence, the policymaker's expected payoff from proposing $x_2 \in [0, 1)$ equals $\widehat{\Pi}(x_2)$. The proof of part (b) is similar to that of part (a). ■

The above lemma taken together with next two lemmas jointly establish that regardless of whether the judge rules narrowly or broadly in period one, the policymaker has an optimal proposal. Furthermore, they establish that by increasing the breadth of her first-period ruling, the judge can induce the policymaker to propose a policy closer to the status quo ($x = 0$) than he would otherwise propose.

Lemma 3. *Suppose Assumption 1 holds, and denote the unique value of* x_2 *that maximizes* $\widehat{\Pi}$ *on* $[0, 1]$ *as* x^*. *Then the value of* x_2 *that strictly maximizes* Π_u^n *on* $[0, 2]$ *equals* x^*.

Proof: Suppose Assumption 1 holds: $\widehat{\Pi}$ is single-peaked on $[0, \min\{\alpha, 1\}]$. Further, denote the unique value of x_2 that maximizes $\widehat{\Pi}$ on $[0, 1]$ as x^*. Fact 2(a) informs us that $x^* \in (0, 1)$.

As $x^* \in (0, 1)$, $\widehat{\Pi}(x^*) > \widehat{\Pi}(0) = \pi(0;\alpha)$. Further, since $x^* < 1$, $\Pi_u^n(x^*) = \widehat{\Pi}(x^*)$. These facts, together with the fact that $\Pi_u^n(x) = \pi(0;\alpha)$ for all $x > 1$, imply that any maximizer of Π_u^n on $[0, 2]$ is an element of $[0, 1]$. This fact, together with the fact that $\Pi_u^n(x) = \widehat{\Pi}(x)$ for all $x \in [0, 1]$, implies that the set of maximizers of Π_u^n on $[0, 2]$ is equivalent to the set of maximizers of $\widehat{\Pi}$ on $[0, 1]$. Consequently, the fact that $x = x^*$ is the unique maximizer of $\widehat{\Pi}$ on $[0, 1]$ implies that $x = x^*$ is the unique maximizer of Π_u^n on $[0, 2]$. ■

Lemma 4. *Suppose Assumption 1 holds, and denote the unique value of* x_2 *that maximizes* $\widehat{\Pi}$ *on* $[0, 1]$ *as* x^*. *If* $r_1 \in (0, 1)$, *the value of* x_2 *that strictly maximizes* $\Pi_u^b(\cdot; r_1)$ *equals*

$$\begin{cases} x^*, & \text{if } x^* \leq r_1 \\ r_1, & \text{if } x^* > r_1. \end{cases}$$

If $r_1 = 0$, *any value of* x_2 *maximizes* $\Pi_u^b(\cdot; r_1)$.

Proof: First, suppose that $r_1 \in (0, 1)$. Further, suppose Assumption 1 holds: $\widehat{\Pi}$ is single-peaked on $[0, \min\{\alpha, 1\}]$. Denoting the unique maximizer of $\widehat{\Pi}$ on $[0, 1]$ by x^*, Fact 2(a) informs us that $x^* \in (0, 1)$ and that $x^* \leq \alpha$.

Begin with the case in which $x^* \leq r_1$. As $x^* \in (0, 1)$, $\widehat{\Pi}(x^*) > \widehat{\Pi}(0) = \pi(0;\alpha)$. Further, since $x^* \leq r_1$, $\Pi_u^b(x^*) = \widehat{\Pi}(x^*)$. These facts, together with the fact that $\Pi_u^b(x; r_1) = \pi(0;\alpha)$ for all $x > r_1$, imply that any maximizer of Π_u^b on $[0, 2]$ is an element of $[0, r_1]$. Given that $\Pi^b(x; r_1) = \widehat{\Pi}(x)$ on $[0, r_1]$, it thus follows that the set of maximizers of Π_u^b on $[0, 2]$ is equivalent to the set of maximizers of $\widehat{\Pi}$ on $[0, r_1]$. Since $x = x^*$ is the unique maximizer of $\widehat{\Pi}$ on $[0, 1]$, our supposition that $x^* \leq r_1$ implies that $x = x^*$ is the unique maximizer of $\widehat{\Pi}$ on $[0, r_1]$. Hence, $x = x^*$ is the unique maximizer of Π_u^b on $[0, 2]$.

Now consider the case in which $r_1 \in (0, x^*)$. Since $x^* \leq \alpha$, it follows that $r_1 \in (0, \alpha)$. This fact, together with the fact that π is strictly increasing on $[0, \alpha]$ implies that $\pi(r_1; \alpha) > \pi(0; \alpha)$. Given that $r_1 \in (0, 1)$, we can thus conclude that $\widehat{\Pi}(r_1) > \pi(0; \alpha)$. This fact, together with the fact that $\Pi_u^b(r_1; r_1) = \widehat{\Pi}(r_1)$ and the fact that $\Pi_u^b(x; r_1) = \pi(0; \alpha)$ for all $x > r_1$, implies that any maximizer of Π_u^b on $[0, 2]$ is an element of $[0, r_1]$. This fact, together with the fact that $\Pi_u^b(x; r_1) = \widehat{\Pi}(x)$ for all $x \in [0, r_1]$, implies that the set of maximizers of Π_u^b on $[0, 2]$ is equivalent to the set of maximizers of $\widehat{\Pi}$ on $[0, r_1]$. Since $\widehat{\Pi}$ is single-peaked around x^* over the interval $[0, \min\{\alpha, 1\}]$, our supposition that $r_1 < x^*$ implies that the unique maximizer of $\widehat{\Pi}$ on $[0, r_1]$ is $x = r_1$. Hence, $x = r_1$ is the unique maximizer of Π_u^b on $[0, 2]$.

Finally, consider the case in which $r_1 = 0$. Then inspection of Π_u^b reveals that it is invariant in x_2 and so any value of x_2 is a maximizer. ■

A.2.1 Micro-foundations for Assumption 1 and implications of concavity of π for the policy-maker's policy choice. Lemmas 3 and 4 rest on Assumption 1: both lemmas suppose that $\widehat{\Pi}$ is single-peaked on $[0, \min\{\alpha, 1\}]$. We now show that Assumption 1 holds when π is strictly concave (and thus also holds when $\pi(x; \alpha) = -\mid x - \alpha \mid^\lambda$, provided $\lambda > 1$). We also show that Assumption 1 holds when $\pi(x; \alpha) = 1/(\mid \alpha - x \mid + \lambda)$, provided $\lambda > 0$.

Fact 3 *(a) Suppose π is strictly concave in x. Then Assumption 1 holds. (b) Suppose $\pi(x; \alpha) = 1/(\mid \alpha - x \mid + \lambda)$, where $\lambda > 0$. Then Assumption 1 holds.*

Proof: We begin with part (a): Accordingly, suppose that π is strictly concave. We will show that Assumption 1 holds. Recall that

$$\widehat{\Pi}(x) \equiv x\pi(0; \alpha) + (1 - x)\pi(x; \alpha).$$

Due to the continuity of $\widehat{\Pi}$ on $[0, 1]$, to show that $\widehat{\Pi}$ is single-peaked on $[0, \min\{\alpha, 1\}]$, it is sufficient to show that $\widehat{\Pi}$ is strictly concave on $(0, \min\{\alpha, 1\})$. Notice that for all $x \in (0, \min\{\alpha, 1\})$,

$$\frac{\partial^2 \widetilde{\Pi}}{\partial x^2}(x) = -2\frac{\partial \pi}{\partial x}(x; \alpha) + (1 - x)\frac{\partial^2 \pi}{\partial x^2}(x; \alpha).$$

For all $x \in (0, \min\{\alpha, 1\})$, the above expression is negative. That this is so follows from the following observations taken together: when $x < \alpha$, π is increasing at x (so $\partial\pi/\partial x(x; \alpha) > 0$); when $x < 1$, $1 - x > 0$; and, when π is strictly concave, $\partial^2\pi/\partial x^2(x; \alpha) < 0$.

We now turn to part (b). Suppose that $\pi(x; \alpha) = 1/(\mid \alpha - x \mid + \lambda)$, where $\lambda > 0$. We will show that Assumption 1 holds. To do so, let

$$\hat{\alpha}(\lambda) \equiv \frac{1}{2}(1 - 2\lambda + \sqrt{1 + 4\lambda^2}).$$

One can show that $\hat{\alpha}(\lambda) \in (0, 1)$. Given the continuity of $\widehat{\Pi}$ in x on $[0, 1]$, to show that $\widehat{\Pi}$ is single-peaked on $[0, \min\{\alpha, 1\}]$, it is sufficient to show that for any policymaker with an ideal point $\alpha \leq \hat{\alpha}(\lambda)$, $\widehat{\Pi}$ is strictly increasing on $(0, \alpha)$ and that for any policymaker with an ideal point $\alpha > \hat{\alpha}(\lambda)$, $\widehat{\Pi}$ is strictly concave on $(0, \min\{\alpha, 1\})$.

Letting $\xi(x) \equiv x^2 + \alpha + \lambda - 2x(\alpha + \lambda)$, note that for any $x \in (0, \min\{\alpha, 1\})$,

$$\frac{\partial \widehat{\Pi}}{\partial x}(x) = \frac{\xi(x)}{(\alpha + \lambda)(\alpha + \lambda - x)^2},$$

and that

$$\frac{\partial^2 \widehat{\Pi}}{\partial x^2}(x) = -\frac{2(\alpha + \lambda - 1)}{(\alpha + \lambda - x)^3}.$$

Begin by supposing that $\alpha \leq \hat{\alpha}(\lambda)$, which together with our restriction to policy-makers with positive ideal points implies that $\alpha \in (0, \hat{\alpha}(\lambda)]$. We need to show that $\partial\widehat{\Pi}/\partial x(x) > 0$ for all $x \in (0, \alpha)$. Notice that $\partial\widehat{\Pi}/\partial x(x) > 0$ for all $x \in (0, \alpha)$ if and only if $\xi(x) > 0$ for all $x \in (0, \alpha)$. Since ξ is strictly decreasing in x on $[0, \alpha]$, to show that $\partial\widehat{\Pi}/\partial x(x) > 0$ for all $x \in (0, \alpha)$, it is sufficient to show that $\xi(\alpha) \geq 0$. Notice that $\xi(\alpha)$ is strictly concave in α and is equal to 0 if and only if $\alpha = \left(1 - 2\lambda - \sqrt{1 + 4\lambda^2}\right)/2 < 0$ or $\alpha = \hat{\alpha}(\lambda)$. This fact, together with our supposition that $\alpha \in (0, \hat{\alpha}(\lambda)]$, implies that $\xi(\alpha)$ is non-negative.

Now consider the case in which $\alpha > \hat{\alpha}(\lambda)$. We need to show that for all $x \in (0, \min\{\alpha, 1\})$, $\partial^2\widehat{\Pi}/\partial x^2(x) < 0$. To prove this claim, it is sufficient to show that $\alpha+\lambda > 1$. Now notice $\hat{\alpha}(\lambda) + \lambda = \left(1 + \sqrt{1 + 4\lambda^2}\right)/2 > 1$. And since $\alpha > \hat{\alpha}(\lambda)$, it follows that $\alpha + \lambda > 1$. ■

Fact 4. *Suppose π is strictly concave. Any maximizer x^* of $\widehat{\Pi}$ on* $[0, 1]$ *is weakly less than* $1/2$.

Proof: Suppose π is strictly concave. We know from Fact 2(a) that any maximizer of $\widehat{\Pi}$ on $[0, 1]$ is an element of $(0, 1)$ and weakly less than α. So if $\alpha \leq 1/2$, it immediately follows that any maximizer of $\widehat{\Pi}$ on $[0, 1]$ is weakly less than $1/2$. Now consider the case in which $\alpha > 1/2$. The strict concavity of π implies that $\widehat{\Pi}$ is strictly concave on $(0, \min\{\alpha, 1\})$ (see the proof of part (a) of Fact 3). Consequently, to show that any maximizer of $\widehat{\Pi}$ on $[0, 1]$ is weakly less than $1/2$, it is sufficient to show that $\partial\widehat{\Pi}/\partial x(1/2) \leq 0$. As

$$\frac{\partial \widehat{\Pi}}{\partial x}\left(\frac{1}{2}\right) = \pi(0; \alpha) - \pi\left(\frac{1}{2}; \alpha\right) + \frac{1}{2}\frac{\partial \pi}{\partial x}\left(\frac{1}{2}; \alpha\right),$$

$\partial\widehat{\Pi}/\partial x(1/2) \leq 0$ if and only if

$$\frac{\partial \pi}{\partial x}\left(\frac{1}{2}; \alpha\right) \leq \frac{\pi\left(\frac{1}{2}; \alpha\right) - \pi(0; \alpha)}{\frac{1}{2} - 0}.$$

The strict concavity and differentiability of π in x, together with Theorem 7.9 of Sundaram (1996, p. 183), ensures that the above inequality holds. ■

A.3. The judge's first-period problem

We will use the following fact throughout this section.

Fact 5. *Suppose $0 \leq a < b \leq 2$. The expression $\int_a^b u(r;\theta)d\theta$ is single-peaked in r on $[0,2]$ and is strictly maximized when $r = (a+b)/2$.*

Proof: Apply a proof technique similar to that used to prove Fact 1. ■

Suppose that the judge has reviewed $x_1 = 1$ and observed that $s_1 =$ unacceptable. Write V_u^n for the judge's expected payoff from ruling narrowly (i.e. issuing an incomplete rule that declares all policies weakly above $x_1 = 1$ as unconstitutional), and write $V_u^b(r_1)$ for the judge's expected payoff from ruling broadly (i.e. issuing an incomplete rule with a cut-off $r_1 < 1$ in which all policies strictly above r_1 are declared unconstitutional). Throughout this section, we will assume that Assumption 1 is satisfied. This implies that the policymaker's response to the judge's first-period ruling is governed by Lemmas 3 and 4. As before, we shall let x^* denote the unique maximizer of $\widehat{\Pi}$ on $[0,1]$. Finally, we assume that the judge incurs an infinitesimal cost if she issues a broad ruling. In what follows, we will denote this cost by ε, where $\varepsilon > 0$. This assumption ensures that for almost all parameterizations of our model, there will be at most one first-period ruling that is consistent with equilibrium behavior for the judge.

Lemma 5. *Suppose that Assumption 1 holds. Then in any sequential equilibrium, we have the following:*

(a) The judge's expected payoff from issuing a narrow ruling:

$$V_u^n \equiv \int_0^{x^*} u\left(\frac{x^*}{2};\theta\right) \,\mathrm{d}\theta + \int_{x^*}^1 u\left(\frac{x^*+1}{2};\theta\right) \,\mathrm{d}\theta.$$

(b) The judge's expected payoff from issuing a broad ruling with breadth $r_1 \in [0,1)$ is

$$V_u^b(r_1) = \begin{cases} \int_0^{r_1} u\left(\frac{r_1}{2};\theta\right) \,\mathrm{d}\theta + \int_{r_1}^1 u(r_1;\theta)\,\mathrm{d}\theta - \varepsilon, & \text{if } r_1 < x^* \\ \int_0^{x^*} u\left(\frac{x^*}{2};\theta\right) \,\mathrm{d}\theta + \int_{x^*}^1 u(r_1;\theta)\,\mathrm{d}\theta - \varepsilon, & \text{if } x^* \leq r_1 < \frac{x^*+1}{2} \\ \int_0^{x^*} u\left(\frac{x^*}{2};\theta\right) \,\mathrm{d}\theta + \int_{x^*}^1 u\left(\frac{x^*+1}{2};\theta\right)\,\mathrm{d}\theta - \varepsilon, & \text{if } \frac{x^*+1}{2} \leq r_1. \end{cases}$$

Proof: We begin by proving part (a). Suppose that the judge has (i) reviewed $x_1 = 1$, (ii) observed that $s_1 =$ unacceptable, (iii) has issued a narrow first-period ruling, and (iv) Assumption 1 is satisfied. Notice that (i) and (ii) imply that in any sequential equilibrium, the density of the judge's posterior belief about θ is equal to 1 for all $\theta \in [0,1)$. Given the judge's beliefs, establishing part (a) amounts to establishing that the judge's payoff for any $\theta < x^*$ is $u(x^*/2;\theta)$ and the judge's payoff for any $\theta \geq x^*$ is $u((x^*+1)/2;\theta)$.

Given (iv) and Lemma 3, the policymaker responds to a narrow first-period ruling by proposing x^*. As such, Lemma 1 ensures that in the event that $s_2 =$ unacceptable, the judge issues a second-period ruling with cut-off $x^*/2$, and in the event that $s_2 =$ acceptable, the judge issues a second-period ruling with cut-off $(x^*+1)/2$. Since $s_2 =$ unacceptable whenever $\theta < x^*$, for any $\theta < x^*$, the judge's payoff is $u(x^*/2;\theta)$; and since $s_2 =$ acceptable whenever $\theta \geq x^*$, for any $\theta \geq x^*$, the judge's payoff is $u((x^*+1)/2;\theta)$. Hence, part (a) follows. Part (b) is proved in an analogous manner. ■

Write $V_u^{net}(r_1; x^*)$ for the judge's net benefit from issuing a broad ruling with breadth $r_1 \in [0, 1)$ when a narrow ruling elicits x^*. Thus,

$$V_u^{net}(r_1; x^*) = V_u^b(r_1) - V_u^n$$

Notice that $V_u^{net}(\cdot; x^*)$ inherits the continuity of V_u^b in r_1.

Fact 6. *(a) For all $r_1 \geq x^*$, $V_u^{net}(r_1; x^*) < 0$. (b) $V_u^{net}(r_1; x^*) \geq 0$ only if $x^* > (3 + \sqrt{3})/6$.*

Proof: We begin with part (a). Suppose that $r_1 \geq x^*$. We need to show that $V_u^{net}(r_1; x^*) < 0$. First, consider the case in which $r_1 \in [(x^* + 1)/2, 1)$. In light of Lemma 5, $V_u^{net}(r_1; x^*) = -\varepsilon < 0$. Now consider the case in which $r_1 \in [x^*, (x^* + 1)/2)$. In light of Lemma 5,

$$V_u^{net}(r_1; x^*) = \int_{x^*}^1 u(r_1; \theta)\, d\theta - \int_{x^*}^1 u\left(\frac{x^* + 1}{2}; \theta\right) \mathrm{d}\theta - \varepsilon,$$

which is negative, as $\int_{x^*}^1 u((x^* + 1)/2; \theta)\, \mathrm{d}\theta > \int_{x^*}^1 u(r_1; \theta)\, \mathrm{d}\theta$ (Fact 5) and $\varepsilon > 0$.

We now turn to part (b). For all $r_1 \in (0, x^*)$,

$$\frac{\partial V_u^{net}(r_1; x^*)}{\partial r_1} = \frac{\partial V_u^b(r_1; x^*)}{\partial r_1} = \frac{2 - 3r_1}{2}$$

and

$$\frac{\partial^2 V_u^{net}(r_1; x^*)}{\partial r_1^2} = \frac{\partial V_u^b(r_1; x^*)}{\partial r_1} = -\frac{3}{2},$$

the latter of which implies that $V_u^b(\cdot; x^*)$ is strictly concave in r_1 on $(0, x^*)$.

Suppose that $x^* \leq 2/3$. Then $\partial V_u^{net}/\partial r_1(r_1; x^*) > 0$ for all $r_1 \in (0, x^*)$. This fact, together with the continuity of $V_u^{net}(\cdot; x^*)$ in r_1 on $[0, 1)$ and part (a) of this lemma, implies that $V_u^{net}(r_1; x^*) < 0$ for all $r_1 \in [0, 1)$. Consequently, if $V_u^{net}(r_1; x^*) \geq 0$, then $x^* > 2/3$.

Now suppose that $x^* > 2/3$. Then $r_1 = 2/3$ is the unique solution to the first-order condition

$$\frac{\partial V_u^{net}(r_1; x^*)}{\partial r_1} = 0$$

on $(0, x^*)$. This fact, together with the fact that $V_u^{net}(\cdot; x^*)$ is strictly concave in r_1 on $(0, x^*)$ and continuous in r_1 on $[0, x^*)$, implies that the value of r_1 that maximizes the judge's net benefit of ruling broadly on $[0, x^*)$ is $r_1 = 2/3$. This fact, together with part (a), implies that $V_u^{net}(r_1; x^*) \geq 0$ only if

$$V_u^{net}\left(\frac{2}{3}; x^*\right) = \frac{1}{12}(1 - 6x^*(1 + x^*)) - \varepsilon \geq 0.$$

As $\varepsilon > 0$, the above inequality holds only if $x^* > (3 + \sqrt{3})/6$. ■

A.4. Proof of Proposition 1

Before proving Proposition 1 of the main text, we restate it in slightly more technical terms.

Proposition 1 *Suppose Assumption 1 holds and consider a sequential equilibrium. Further, suppose that the judge regards $x_1 = 1$ as unacceptable (s_1 = unacceptable).*

(a) If the policymaker is risk-averse (π is strictly concave), the judge will never rule broadly.
(b) If the judge rules broadly, the policymaker's ideal point must be sufficiently extreme $\left(\alpha > (3+\sqrt{3})/6\right)$.
(c) If the judge issues a broad ruling, she sets $r_1 = 2/3$.
(d) If the policymaker is risk-accepting, and his ideal point satisfies (b), then scenarios exist under which the judge rules broadly.

Proof: Suppose that Assumption 1 holds and consider a sequential equilibrium. Further, suppose that the judge regards $x_1 = 1$ as unacceptable (s_1 = unacceptable).

Begin with part (a). Suppose π is strictly concave, and, by way of contradiction, suppose that the judge issues a broad ruling. Thus, there exists a value of $r_1 \in [0, 1)$ such that $V_u^{net}(r_1; x^*) \geq 0$. A necessary condition for this inequality to hold is $x^* > (3+\sqrt{3})/6$ (Fact 6(b)). However, since π is strictly concave, it follows that $x^* \leq 1/2$ (Fact 4), which yields a contradiction.

Now turn to part (b). If the judge issues a broad ruling, then there exists a value of $r_1 \in [0, 1)$ such that $V_u^{net}(r_1; x^*) \geq 0$. In light of Fact 6(b), this condition is satisfied only if $x^* > (3+\sqrt{3})/6$. This fact, together with the fact that $x^* \leq \alpha$ (Fact 2(a)), implies that $\alpha > (3+\sqrt{3})/6$ in any equilibrium in which the judge rules broadly.

Now consider part (c). Suppose the judge rules broadly. Then there exists a value of $r_1 \in [0, 1)$ such that $V_u^{net}(r_1; x^*) \geq 0$. This implies that $x^* > (3+\sqrt{3})/6$ and that $r_1 \in [0, x^*)$ (Fact 6). Now for any $r_1 \in [0, x^*)$, $V_u^b(r_1) = \int_0^{r_1} u(r_1/2; \theta)\, d\theta + \int_{r_1}^1 u(r_1; \theta)\, d\theta$. As such, for any $r_1 \in (0, x^*)$,

$$\frac{\partial V_u^b(r_1; x^*)}{\partial r_1} = \frac{2 - 3r_1}{2}$$

and

$$\frac{\partial^2 V_u^b(r_1; x^*)}{\partial r_1^2} = -\frac{3}{2},$$

the latter of which implies that $V_u^b(\cdot; x^*)$ is strictly concave in r_1 on $(0, x^*)$. Further, note that $r_1 = 2/3$ is the unique solution to the first-order condition

$$\frac{\partial V_u^b(r_1; x^*)}{\partial r_1} = 0$$

on $(0, x^*)$. In light of the continuity of V_u^b in r_1 on $[0, x^*)$, it thus follows that the value of r_1 that strictly maximizes V_u^b on $[0, x^*)$ is $r_1 = 2/3$. Consequently, if the judge issues a broad ruling, she sets $r_1 = 2/3$.

Lastly, turn to part (d). Suppose that $\pi(x; \alpha) = 1/(\mid \alpha - x \mid + \lambda)$ and $\lambda > 0$. Figure 3 identifies those values of α and λ for which the judge rules broadly when $\varepsilon \approx 0$. ■

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Notes

1. This is, of course, a direct consequence of Article 3, Section 2 of the US Constitution, which limits the Court's jurisdiction to specific 'cases or controversies'.
2. The scope of the rule was so broad that Justice O'Connor, a champion of narrow rulings, refused to sign Scalia's opinion, even though she concurred with the Court's judgment. Instead, she urged a narrow resolution: 'I would . . . hold that the State *in this case* [emphasis added] has a compelling interest in regulating peyote use by its citizens, and that accommodating respondents' religiously motivated conduct "will unduly interfere with fulfillment of the governmental interest".'
3. In work posterior to this paper, Parameswaran (2012), using a closely related modeling framework, offers a similar insight. We also note that there is an important complementarity between our argument and a recent paper by Baker and Mezetti (2012), who investigate how the ability to *choose* cases affects the development of law when judges must pay a cost for hearing a case. Because Baker and Mezetti focus on the impact of docket control, they abstract away from the manner in which current decisions can shape future cases, which is the focus of our analysis.
4. As Sunstein (2005, pp. 1915–16) puts it,

   > The Court might choose a narrow ruling precisely because it seeks to retain room for democratic debate and experimentation . . . where the issue has a great deal of novelty, and where the Court is unsure how to handle it, a great deal is to be gained by allowing the democratic process continuing room for experimentation.

5. In addition to the normative literature on judicial minimalism, scholars have recently begun to focus on positive accounts of the choice between narrow and broad opinions. For example, Clark (2012) investigates how high courts can use broad and narrow rules to guide decision-making by lower courts.
6. That is, judges in our model care about 'policy' only in so far as it is acceptable (or unacceptable) under their legal principle; they have no preferences *among* policies that are acceptable. We should note that there is an affinity between this approach and recent work that makes use of 'case space' models. For example, Lax (2012) explores the choice between rules and standards for a court attempting to control lower courts in a judicial hierarchy. In our approach, the goal for the court is to develop a legal rule over time that approximates its preferred rule as much as possible. For Lax, the goal for the court is to develop a legal rule that results in case dispositions by lower courts that reflect the court's preferred dispositions as much as possible.
7. Justice Potter Stewart's famous concurrence in *Jacobellis v. Ohio* provides a colorful rendition of this point. While he agreed that hard-core pornography may be constitutionally criminalized,

Stewart stressed that knowing what qualifies under this label can be 'discovered' only on a case-by-base basis: 'I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description, and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that.'

8. This argument is closely related to Justice Felix Frankfurter's objection to the practice of judicial advisory opinions, which he regarded as dangerous precisely because they required judges to opine on the constitutionality of policies in the absence of the information revealed in a concrete dispute (see Rogers and Vanberg, 2002).
9. For the moment, we intentionally leave the policymaker's utility function general. We explore the implications of specific functional forms in Section 3.
10. The model we develop has close affinity to 'case space models', which derive from seminal work by Kornhauser (1992), and have become increasingly common in modeling courts and judicial behavior (e.g. Carrubba et al., 2012; Lax and Cameron, 2007; Lax, 2007). While these models conceive of the space as representing the legally relevant 'facts' that characterize a case, the space in our model represents the policies a judge can be asked to review.
11. Formally, the judge observes a signal $s \in$ {acceptable, unacceptable}. The signal observed depends on the location of x relative to the legal threshold θ, such that

$$Pr(s = acceptable|x, \theta) = \begin{cases} 1, & x \leq \theta \\ 0, & x > \theta. \end{cases}$$

12. It is this uncertainty over the precise location of the judge's underlying legal threshold, and the possibility of learning about her legal preferences by hearing cases, that marks one distinction between our model and most existing case space models, which assume that judges know precisely where their preferred legal rules lie.
13. A technical point: our definition of a bright-line rule is silent as to whether $x = r$ is declared constitutional or unconstitutional. Thus, when $r = \theta$, for all cases to be disposed of correctly, policy $x = r$ must be declared constitutional in addition to all policies $x < r$.
14. Exactly how an incomplete rule with cutoff r_1 treats policy $x = r_1$ is not pinned down by our discussion in the text. In what follows, we use the following conventions: When x_1 is acceptable, we restrict attention to $r_1 \geq x_1$ in which policy $x = r_1$ is declared constitutional. When x_1 is unacceptable, we restrict attention to $r_1 \leq x_1$. When $r_1 < x_1$, the judge reserves judgement on policy $x = r_1$; in contrast, when $r_1 = x_1$, policy $x = r_1$ is declared unconstitutional.
15. In a related paper, Niblett (2013, p. 24) uses the same definition of 'narrow' rules. Niblett's paper investigates how legal rules develop in a decentralized fashion among a multiplicity of judges who issue narrow rules but respect stare decisis; he does not consider broad rules.
16. Naturally, this is not the only possible characterization of narrow and broad rules. Most obviously, one could conceive of a broad rule as one that announces a 'bright-line' $r_1 \geq x_1$ such that all $x > r_1$ are unconstitutional while all $x \leq r_1$ are constitutional. The advantage of the current formulation is that it implies that narrow and broad rules are comparable in the sense that both make pronouncements about what is permissible while remaining silent on what *may not* be permissible (and vice versa). Broader rules simply have a wider scope of constitutionality (unconstitutionality) that goes beyond the immediate case. As we show below, this formulation also has the advantage of providing scope for 'rule development' that is consistent with common notions of stare decisis.
17. An alternative assumption is that opinions can be overturned at some cost. The results below are consistent with such a version of the model, assuming that the cost of reversing a previous decision is sufficiently high.
18. In a sequential equilibrium, one can show that both along the path of play and off the path of play, beliefs will be uniformly distributed over some interval. The exact interval will depend on the history of play.

19. The case in which x_1 is acceptable, and the judge holds the updated belief that θ is uniformly distributed on $[x_1, 2]$, is analogous.
20. Similarly, if the judge regards x_1 as acceptable, and therefore holds the updated belief that θ is uniformly distributed on $[x_1, 2]$, the most informative second-period case is $x_2 = (x_1 + 2)/2$. This dynamic is similar to the dynamic of the Baker and Mezetti (2012) model, in which judges choose to hear cases at the mid-point of the 'uncertainty interval' because it is costly to hear cases, and they therefore have an incentive to look for those that are most informative.
21. The case in which x_1 is acceptable under the judge's legal principle is treated next.
22. This is intuitive since policies to the right are dominated by proposing the ideal point, which has a higher probability of being declared constitutional, and has a higher policy payoff if upheld.
23. If $r_1 \geq x^*$, the policymaker will continue to propose x^*.
24. At the same time, a broad rule cannot fully 'control' the policymaker: the policymaker can never be induced to make a proposal above his ideal point α. For this reason, the judge will never set a broad rule $r_1 > \alpha$.
25. The primitives on the policymaker's utility function π sufficient to ensure that his expected payoff given his uncertainty about θ is single-peaked in x_2 on $[0, \min\{\alpha, 1\}]$ are discussed in Appendix A.2.1. This single-peakedness condition, formalized in the appendix, ensures that the policymaker's optimal response to a broad first-period ruling is 'well-behaved'.
26. Note an additional interesting feature: once the policymaker's ideal point becomes too extreme, the judge will once again issue a narrow rule.
27. Having said that, we would be surprised to learn that judges do not consider potential policy responses, although for reasons that may be more closely tied to the desire to influence public policy directly (see Staton and Vanberg, 2008).

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